

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|                             |   |                            |
|-----------------------------|---|----------------------------|
| In re the Application of:   | ) |                            |
| Søren Molgaard Hansen       | ) | Group Art Unit: 3643       |
|                             | ) |                            |
| Serial No.: 10/774,300      | ) | Examiner: David J. Parsley |
|                             | ) |                            |
| Filed: February 6, 2004     | ) |                            |
|                             | ) |                            |
| For: METHOD AND A PLANT FOR | ) |                            |
| PREPARING SHRIMPS           | ) |                            |
| _____                       | ) |                            |

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

DECLARATION UNDER 37 CFR 1.132

I, Søren Molgaard Hansen, declare as follows:

1. I am the inventor of the invention disclosed and claimed in US Patent Application No. 10/774,300; filed February 6, 2004. I am very familiar with the disclosure of that application.

2. I have been employed by Cabinplant International A/S ("Cabinplant"), the assignee of the above-mentioned application since Jan 1986. My position with Cabinplant is Technical Director.

3. My educational background and professional qualifications are as follows:

*Master in engineering and science 1997  
head of Engineering department of Cabinplant.*

4. As a result of my educational background and work experience, I have become very knowledgeable in the field of harvesting and processing fresh shellfish from the sea.

5. I have reviewed the claims of the above-referenced application, and I have also reviewed the prior art references cited against those claims, namely, US Patent No. 4,916,775 – Gallant

("Gallant"); US Patent No. 6,099,400 – Ragnarsson et al. ("Ragnarsson"); and US Patent No. 4,111,798 – Peterson et al. ("Peterson '798"). Furthermore, I have reviewed the Office Action dated March 16, 2007 in the subject application.

6. My invention, as defined, for example, in claim 1 of the subject application, is a method of separating the meat of egg-bearing shrimps from the shells and eggs of the shrimps, comprising the steps of (a) steam boiling the shrimps at a high pressure exceeding the atmospheric pressure, and at an elevated temperature exceeding the boiling temperature of water at the atmospheric pressure (i.e., "pressure cooking" the shrimp with super-heated steam); b) rapidly cooling the shrimps; c) peeling the cooled shrimps by mechanically opening the shells of the shrimps; d) separating the shrimp meat from the "remains" (shell parts and eggs that remain attached to the meat after peeling) in a flotation separation step in which the shrimp meat and the attached remains are introduced into a brine solution, including 6-14% NaCl by weight, for causing the meat to float on the brine solution while allowing the shell parts and eggs to sink; and e) removing the meat from the brine solution.

7. Gallant was cited in the above-referenced Office Action for its disclosure of a method and apparatus for shucking and eviscerating clams and other "bivalvular mollusks" (column 1, lines 6-15), which includes the immersion of the shucked clam meat in a brine separator, in which the meat is separated from any remaining shells and fines. The brine separator causes the meat to float and the shells to sink. The Gallant method and apparatus is disclosed for use with mollusks, which do not contain eggs. Mollusk eggs are dispelled into the water for external fertilization, and the mollusks (particularly clams), when harvested, do not contain eggs. Crustaceans, such as shrimp, by contrast, typically carry eggs on the body of the females, and these eggs must be removed from the meat along with the shells.

8. Claim 1 of my above-referenced application specifically relates to a method of separating shrimp meat from both the shells and the eggs that are frequently carried on the shrimp. Gallant does not address this problem. As mentioned above, Gallant deals only with bivalvular mollusks, which do not contain eggs, and there is nothing in Gallant that suggests that it can be used to separate eggs from egg-bearing crustaceans, such as shrimp. Having reviewed the

Gallant patent, I am convinced that the apparatus disclosed in that patent would NOT be "capable of operating on other shellfish such as shrimp with eggs," as asserted in the above-referenced Office Action. While it might be possible to use the apparatus disclosed in Gallant on shellfish of the size of shrimp (especially since shrimps have a wide range of sizes), the size of the shellfish being processed has nothing to do with whether the processing can remove eggs from the shellfish meat. In other words, it is not the size of the organism that matters (both shrimp and clams come in wide ranges of size), but it is rather the very different physical natures and characteristics of clams, on the one hand, and shrimps, on the other, that makes the Gallant method and apparatus unsuitable for removing both eggs and shells from shrimp meat.

9. Moreover, the initial shell separation step in Gallant is to crush the whole clams after they are steamed, and then to agitate the mixture of crushed shells and meat to separate the meat from the crushed shell bits. See column 2, lines 44-55. There is no suggestion in Gallant of mechanically peeling a shell from the meat, as defined in my claimed invention. This difference is, again, dictated by the substantial differences between shrimp shells (which must be peeled) and clam shells (which cannot be peeled). There is no suggestion, in either Gallant or any of the secondary references, that Gallant may be adapted to peel a shell off a crustacean, as specified in my claimed invention. In short, there is nothing in any of the cited art of record to suggest that the Gallant's apparatus may be modified by using peeling instead of crushing/agitating, because peeling would not work with clams or other mollusks. Thus, the modification of Gallant suggested by the Examiner would render Gallant unworkable for its intended purpose.

10. It is therefore my conclusion that the Gallant apparatus could NOT be used to perform my claimed method, and that one of ordinary skill in the art of shellfish harvesting and processing would not look to the disclosure of the Gallant patent in an attempt to solve the problem of separating the meat of shrimps from both the shells and the eggs of the animals.

11. Furthermore, Claim 1 specifically recites the use of a brine solution having 6-14% NaCl by weight. This range is critical, because less than about 6% NaCl will not result in sufficient meat separation, particularly from the eggs (which are denser than the boiled shrimp meat), while more than about 14% will affect the flavor of the meat. The advantages of the specific salt

concentration range are set forth in the specification at page 4, line 16, to page 5, line 2, and at page 13, lines 20-28 (the latter citation discussing the specific concentration of 9.5% by weight, which is nearly at the middle of the claimed range).

12. Peterson et al. '798 was cited for its disclosure of a material separation device that can be used in the fishing/shellfish industry that, in a specific example (column 15, lines 1-20), uses a brine solution with 11% NaCl by weight. This specific example, however, is used to separate "defective" potatoes from "sound" potatoes, and there is nothing in the reference to suggest (1) that the specified 11% brine solution can or should be used to separate shrimp meat from shrimp shells and eggs; (2) that this (or any other) brine concentration is at all critical to the functioning of the disclosed device; or (3) that the specified 11% brine solution will work at all without the introduction of solid beads into the brine to alter its density (which is not needed in my claimed invention). Thus, there is nothing in the references to suggest combining the teaching of Peterson et al. '798 with those of Gallant and Ragnarsson in the manner suggested in the Office Action of March 16, 2007.

13. In summary, it is my considered opinion, based on my expertise and experience in the field of shellfish harvesting and processing, that (1) Gallant could not be employed to separate shrimp meat from both the shells and the eggs of the shrimp; (2) those skilled in the pertinent technology in my field of expertise would not look to Gallant for a solution to the problem of separating shrimp meat from both the eggs and shells of the shrimp; (3) the disclosure of Peterson et al. '798 would not be looked to by those skilled in the pertinent technology in my field to modify the Gallant apparatus to separate shrimp meat from both shrimp shells and eggs, as set forth, for example, in claim 1 of the subject application; and (4) even if the three references cited in the Office Action were to be combined as suggested in the Office Action, the result would still not yield a method of separating the meat of egg-bearing shrimps from both the eggs and shells of the shrimps, as defined in claim 1 of the subject application.

14. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are

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Declaration of S. M. Hansen  
Response to Office Action of March 16, 2007

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punishable by fine or imprisonment, or both, under Title 18, United States Code, § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
Søren Molgaard Hansen

3rd sep. 2007  
Date